CHICAGO
MEDICAL JOURNAL.

VOL. XXI.] JANUARY, 1864. [No. 1.

ORIGINAL COMMUNICATIONS.

The following report was prepared by Surgeon Cleaveland at the request of Dr. Brinton, as a continuation to the "Surgical History of the War." As it may be of great service, the author has, at our request, furnished us with a copy for present publication.—[*Eds. Journal.*]

HOSPITAL GANGRENE IN THE U. S. MILITARY HOSPITAL, MEMPHIS, TENN.,

By C. H. CLEAVELAND, A. A. S., U. S. A.

General History.—Although I have been at no inconsiderable pains to obtain a history of Hospital Gangrene, as it has appeared in the Military Hospitals of this city, I am convinced that I have been unable to collect all the facts needed for a complete history, and therefore shall confine myself mainly to such as fell under my own personal observation.

The first cases of this disease which fell under my notice were those of Lieuts. Alban, Deelomyer, Letuir, and Davis, who were brought from Vicksburg to Officers' Hospital, of which I then had charge. They were received from the Hospital boat on the evening of the 27th of May, and each had

gangrene of several days' standing when admitted, and were expected to survive but a very few hours. In fact Lieut. Letner, who had gangrene of the stump of the left leg, died on the 29th, the second day after admission, and Lieut. W. H. Alban on the 1st of June, the fourth day after admission.

Although the flaps sloughed away from the stump of Lieut. Deelomyer so as to leave the bone uncovered for at least two inches, still the periosteum remained vitalized, the gangrene was quickly arrested by the application of Labarraque's Chlorinated Sodæ Solution, under the vigilant care of Cadet Randall, who attended to the dressing of this patient. Granulations sprang up all over the surface of the bone, a fine conical stump was formed, and on the 12th of June, about a fortnight after admission, he was dismissed on leave of absence and went to his home.

About this time, and later, quite a number of cases occurred in the different hospitals, but their nature was not always understood by attendant surgeons. When attention was specially called to this disease by Surgeon Irwin, Superintendent of Military Hospitals, cases were found in the Union Hospital to the number of twelve—June 25th—and soon thereafter at the Jackson, Gayoso and Overton Hospitals. The Surgeon in charge of Adams Hospital reports the case of a man who came from the vicinity of Vicksburg on the 18th of February. He says that is the only case which has occurred in that Hospital this year, a statement evidently erroneous, as Corporal Fuller was sent here from there with gangrene of right ankle on the 9th of August. A similar error occurred in the report of the Surgeon in charge of the Webster Hospital, who says but one case has occurred in his Hospital, and yet he has sent to us Privates Alt, McEvoy, Cloud, McClure, Butler and Overt, all with unmistakable gangrene. From the Overton Hospital we have received fifteen (15) patients, and how many more have had the disease in that Hospital I am unable to determine, as I get no response to my applications for information. From the Jackson Hospital we have received eleven

(11) patients, but from that Hospital, also, have been unable to obtain any farther information.

Up to the 1st of September forty-six (46) patients have been sent to us from other Military Hospitals, having gangrene, which I have reasons for supposing were not more than half the cases that have occurred in the Hospitals. I know of seven (7) cases occurring at the Officers' Hospital which were retained there for treatment as we had no special accommodations for officers.

Not only have there been manifest errors in the reports from different Hospitals in regard to the number of patients who have had gangrene, but the date of its appearance has been incorrectly reported. Early in the month of June the wards of Union Hospital were filled with patients from down the river, and immediately Cadet Randall reported to me that gangrene was among them. Surgeon Irwin states that according to information in his possession, gangrene appeared *first* in the Union, then in the Jackson, the Gayoso, and Overton Hospitals, and his order for organizing and opening Church Hospital was issued on the 19th of June, one week before the disease was *reported* to have appeared in Union Hospital.

Although the order for opening and establishing this Hospital was issued on the 19th of June, yet owing to delay in the Quartermaster's department no patient was received until the 30th of July, and the two days of July are included in the report for the month of August. During its organization, and until the 7th of August, I was in charge of this Hospital, when Surgeon George R. Weeks was assigned to its temporary charge for the special purpose of testing the use of Bromine in the treatment of gangrene.

Until Surgeon Weeks came, we had no Bromine. One ounce had been furnished to the Hospital, but after the dressers had used it once it unaccountably disappeared. During that time reliance was placed mainly in the local use of Labarraque's Solution of Chlorinated Soda applied in its full strength, although the use of Nitric Acid, Acetic Acid, Sul-

phate of Zinc, and Muriated Tincture of Iron was resorted to in some cases.

The favorable result which followed the use of this preparation in the case of Lieut. Deelomyer, at Officers' Hospital, gave me considerable confidence in it, both in gangrene and in erysipelas, which confidence is shown by the Hospital records not to have been misplaced, as every case of erysipelas sent to us was cured by it alone, in from three to five days. Private Samuel Arbothnot was sent here from Jackson Hospital with gangrene in the palm of the left hand, July 30th, and was returned cured of the gangrene, August 8th. Robert Graham was admitted from the Union Hospital on the 31st of July with gangrene of the right arm, and returned with no vestige of gangrene remaining, on the 4th of August. Private William Goff, admitted from Union Hospital, Aug. 1st, with gangrene of right leg, was returned cured, Aug. 4th. Private D. L. Twiman was sent here from the Overton on the 31st of July, with gangrene of the right thigh, and returned cured of gangrene on the 5th of August. Private Fred Louis came from the Jackson Hospital with gangrene of the right hand on the 30th of July, and was returned cured, on the 4th of August. Other similar cures have followed the persistent use of the Chlorinated Soda Solution since that date.

On the 8th of August, when Surgeon Weeks took charge of the treatment he brought with him, from Surgeon Irwin, five (5) ounces of pure Bromine, which supply was exhausted on the 16th of August, and no more has been had since. On the 25th of August, Dr. Warriner, agent of the U. S. Sanitary Commission, gave to the Hospital five bottles of Prof. J. Lawrence Smith's Compound Solution of Bromine, which is now used in place of the pure article, but not to the satisfaction of any one connected with the Hospital, as it evidently is by no means equal in efficiency to the Bromine in full strength.

During the week that pure Bromine was applied it was found, as the Hospital records show, that usually, one single application sufficed to completely eradicate the gangrene. In

cases of apparent failure, it was afterwards found that there were some parts deep, between muscles, under the integuments, or in sulci or sinuses, which the Bromine did not reach. While we had no Bromine, and also, when we had only the Compound Solution, we found it much more difficult, and in some cases quite impossible, to eradicate the disease, mainly from the impossiblity of getting the remedies directly in contact with the entire surface affected.

Up to the 1st of September, forty-six (46) cases of genuine hospital gangrene have been treated in this Hospital. Of that number thirteen (13) died, but none directly from the gangrene. During the month fifteen (15) have been cured, and returned to the Hospitals from which they came, and eighteen (18) still remain under treatment, most of whom are entirely free from gangrone, but are not sufficiently restored in health to leave the Hospital. Some of these will die from the effects of gangrene on the system.

Diagnosis.—Hospital Gangrene as it has been presented to us at this Hospital, has assumed a great variety of appearances. In the earlier stages it has appeared as a dusky, almost black, mass of dead and rotten flesh, occupying the seat of the disease, surrounded by a reddish ring of slightly swollen integuments, which ring varies from one to five lines in breadth, while the adjunct tissues do not appear to be affected by the disease, except that they, as well as the whole body, contain less heat than is natural in healthy structures. Often the disease has burrowed under the integuments bordering a wound, and when the skin dies it loses its epidermis, the true skin becomes reddish, greenish, purplish, or black. When a surface already divested of its skin is affected with the disease (and most of the cases at this Hospital are truly traumatic), the first invasion appears by giving to the surface an ashy gray color, with a pultaceous consistency, and the *peculiar* odor of spoiled meat, by which the disease is readily recognized. This pultaceous, ashy appearance of the surface of wounds presents itself when the areolar tissue is attacked.

When the muscular tissue becomes affected, and when small blood vessels have become ruptured, a dark, grumous, almost black, dirty appearance of the diseased surface is presented, accompanied by a powerful fœtid odor, and usually with an invasion of the disease under the skin, and between the muscles and tendons in the connective tissue, much beyond the boundary of the disease as it appears on a superficial examination. In the case of Private Milseps, who was wounded at Port Hudson on the 27th of May, with a minie ball in the right thigh, and the ball was allowed to remain in until he came here, the disease burrowed in the fascia of the thigh, until his whole thigh appeared gangrenous in the deep-seated parts, and he died suddenly from arrest of circulation. Post mortem examination revealed a detached thrombus in the left auricle of the heart, plugging up the artery, which weighed four hundred and eighty-two (482) grains. One patient, Private T. D. Beggs, who was wounded high up in the right calf by a musket ball, at Helena, on the 4th of July, and brought here on the 31st, had the disease following down the tendon to the os calcis, which was necrosed. Although the entire extent of the leg was laid open, it was too late to save the patient who has since died (Sept. 2d) from the absorption of gangrenous matter. I removed from his thoracic duct a thrombus near six inches in length. These two cases are but extreme illustrations of the tendency of the disease to extend itself in the areolar tissue along plains, and between more solid organs and structures.

But muscles, vessels, nerves, tendons, periosteum and bone are often invaded, when the part affected turns dark, emits a peculiar (gangrenous) odor, dies, softens, and finally liquifies when not removed in the form of slough, or by the dressers's instruments.

Preparation of Wound.—I am fully satisfied that many surgeons have failed in the treatment of Hospital Gangrene, because they have not fully perceived the necessity of thoroughly cleansing the wound of all dead and diseased matter

previous to the use of all local applications. Private James McEvoy, who was wounded at Raymond, Miss., on the 12th of May, and had his right arm amputated at about its middle, had gangrene of the stump about the 20th of June, and was sent here the 10th of August, with a statement that Bromine had been carefully applied daily for eight days. On examination it was found that there were at least twe inches in extent of dead structure on the end of tho stump, and the Bromine had been applied to that and not to the live tissue. All the dead and dying structures were carefully dissected from the surface of the stump, removing a large quantity of putrescent matter, and then Bromine in full strength was cautiously applied to the entire surface, and the disease was at once arrested. He remained ten days, and then was returned to Webster Hospital.

When patients are first brought here it is often necessary to place them under the influence of chloroform, while their wounds are being prepared and to obtund the pain caused by the remedies applied, and afterwards chloroform is not refused them if the dressing is likely to be very painful. The wound is washed by means of a stream of warm water projected from a syringe; all the pultaceous and grumous matter removed with soft cloths; the more tenacious diseased portions taken away with the forceps, the scissors, and scalpel; and finally all blood, water, moisture, and semi-fluid matters under the skin, or between muscles or tendons, are removed by a little swab, made by winding a short strip of soft cloth around a little stick. If the disease has burrowed under the skin it is better to at once open up all such retreats as well as to carefully pare off the diseased portions of the skin on the edges of the wound, that the agent applied may come directly in contact with the vitalized structures in the parts affected. If this thorough preparation of the wound is not attended to, through carelessness or oversight, the progress of gangrene is not likely to be stayed, whatever may be the remedy applied.

Soap-suds as a wash does not answer for gangrenous ulcers

as well as pure warm water, for it appears to combine with the fluids of the surface producing a slimy mixture which it is difficult to remove. A diluted solution of Labarraque's Chlorinated Soda has been found to answer admirably in these cases, for when applied in a gentle stream from a syringe, it can be made to penetrate into all the recesses of the disease, destroying all odor, and dissolving and removing some of the dead matter attached to the surface of the ulcer. At about the strength of sea water it seems to properly stimulate the structures as well as to cleanse them. An ordinary hard-rubber syringe with the little swabs already described, have proved preferable to sponges or cloths for cleansing tender and delicate surfaces.

Local Applications.—Any substance which has the chemical power of decomposing the specific virus of gangrene, so that it no longer exists as gangrene, must possess the property of a curative agent in this disease, provided it can be brought in sufficient quantities in direct contact with each atom of gangrene matter, and, provided also, that it does not possess sufficient power to overcome and destroy the vitality of such still vitalized structures and tissues as we wish to preserve. We have made trials of Nitric Acid, until we have become satisfied of three things in regard to it. It will destroy all gangrenous matter with which it is brought in contact, in its full strength. It is extremely difficult to apply it in its full strength to all parts of the disease in many cases, as in sinuses and sulci, when the moisture already in those parts may so dilute it as to render it inefficient. It is unsafe, for, if brought in contact with the live tissues, nerves, vessels, periosteum, or bone, it is almost certain to cause destruction to the parts and produce irreparable injury. Sulphate of Zinc in solution does not appear powerful enough to arrest the disease in many instances. Acetic Acid has not been applied in a sufficient number of cases to have led to any positive conclusion. The same may be said of the solution of the Chloride of Zinc. The Muriated Tincture as well as the solution of the Per-Sulphate

of Iron have both been used, but mainly on bleeding surfaces and to check hæmorrhage from ruptured vessels, and while they may have a curative power, such property has not been so manifest as to give us much confidence in them as arrestors of gangrene.

Labarraque's Chlorinated Soda Solution has proved quite efficient, applied in its full strength, as an arrestor of gangrene. In all cases where the liquid could be thoroughly applied to the whole of the affected parts, one, or at most, three or four applications, appeared to eradicate the disease. But it could not always be applied to deep-seated parts, or within sulci, without its becoming diluted with the fluids already there,and such a quantity of the solution seemed to be demanded that it was liable to flow beyond the ulcer, and the healthy skin be blistered by it. But during nearly one-half the time this Hospital has been opened, we have placed our main reliance on this agent, and our confidence in it has not been shaken. In all cases of ulceration where no gangrene remains, we wash the surface once or twice a day with this solution diluted and saturate the dressings with it as often as they get dry, or once in two hours, and are well pleased with the result.

Bromine in its full strength, however, is the agent that has given us the most satisfaction. This does not appear caustic enough to destroy healthy tissues, but is of sufficient strength to unite with, and change all the parts affected with the disease. Of course a few drops will not unite with, and change a large amount of gangrenous material, but in all cases under my observation, when the dead matter had been properly dissected away, and the wound cleansed of its pultaceous and other dead matter with the syringe, the forceps, and the swab, and the surface properly dried with soft cloths, one application, or at most but two or three, have sufficed to eradicate all traces of gangrene, and leave the wound a simple ulcer. As has been observed, the wound should be properly and carefully prepared before the Bromine is applied, even if all the other necessary conditions are complied with, should there be

moisture allowed to remain in the deeper portions of the sore, that moisture may so dilute the Bromine as to render it inefficient, or it may protect the subjacent parts from the remedy, and a point of gangrene will remain to infect the whole sore.

Bromine can be conveniently applied by means of little swabs, like those used in cleansing the wound. First, there should be prepared and at hand, a cloth spread with simple cerate, large enough to more than cover the affected surface; the ulcer should be cleansed and dried, and then, an attendant standing near the patient, holds the phial of Bromine from which he removes the stopper just long enough to allow the surgeon to insert into it a little swab, saturating it with the Bromine, which is at once applied to the ulcer. This operation is to be repeated until all parts of the sore are touched with plenty of Bromine, and to parts beyond the reach of the swab Bromine should be injected by means of a glass p.p. syringe, when the sore should be immediately covered with the cerated cloth, to prevent further evaporation of the Bromine, and to protect the ulcer from the atmosphere. Then the part may be dressed with cloths and bandages the same as for simple sores.

The pain which attends and follows the application of Bromine is quite severe, but not more severe nor of longer continuance than follows the application of milder agents. The sense of pain appears even somewhat obtunded by the action of the agent, and after a short time patients express themselves as being much easier than they have been for days.

To surgeons and attendants, Bromine, when incautiously used, proves very disagreeable, and that fact, doubtless, has prevented its use in many cases. If the vapor of Bromine is allowed to come in contact with the eyes and air-passages, such parts suffer severely from the irritation for several minutes, but soon all unpleasant effects pass away. But with proper precaution those parts need not be exposed to Bromine vapor, and ten or twenty patients may have Bromine applied to them in a morning without much discomfort to the surgeon.

Whatever agent is applied to a gangrenous surface, it does not appear desirable to disturb the dressing more than once a day. When Bromine is used it is usually necessary to wait two or three days for the surface of the sore to become thoroughly cleansed before it is again resorted to, but if there remains a decidedly gangrenous odor on the second day, or if it appears at any future time, the parts should be carefully examined and Bromine applied to all affected surfaces. Gangrene can be detected by the trained sense of smell more readily than in any other way, and for several days after the disease has disappeared wounds should be examined in this manner as well as by the eye, and all appearances of taint followed to their sources, and the disease eradicated.

On the second day, usually, after Bromine has been applied the surface of the ulcer looks dark and almost charred; on the third day the dead portions begin to liquify, and the fourth day the surface appears studded with healthy granulations.

After the gangrene is subdued, the wounds are dressed as simple ulcers, but in most cases the dilute Chlorinated Soda Solution is constantly applied, both as a slight stimulant to the newly-formed tissues, and to protect the wound from the virus which may be in the atmosphere of the Hospital.

I have made considerable use of Oakum, wet with a solution of Chlorinated Soda, or of the Chloride of Lime, to gangrenous ulcers *the day after* applying Bromine, and to the simple ulcer after the wound becomes free from gangrene, and am satisfied that in general it should be preferred to lint. It is easy of application, readily absorbs the excretions, and is easily removed when the wound again requires dressing. A very convenient way for the nurses to apply moisture to the sore, I have found to be by means of an ordinary hard-rubber syringe. The solution may be drawn into the syringe, the pipe of which can readily be inserted under the bandage, and the liquor applied directly to the Oakum, filling and covering the ulcer and moistening the entire dressing.

The Compound Solution of Bromine has been extensively

used by us, and especially since our stock of pure Bromine became exhausted, but we do not consider it a good substitute for pure Bromine. It does not appear to be active enough to readily destroy the gangrene. It has been applied carefully, thoroughly and faithfully, day after day, by the swab and the syringe, into parts where the gangrene has burrowed under fascia, and along the tendons, as it is extremely apt to do, and directly to the walls of such extensions, when they have been laid open, by means of pledgets of lint, saturated with it, as well as in the same manner to the original ulcer, and yet we have sometimes failed for days to arrest the disease. I have made careful trial of both the Compound Solution of Bromine and Labarraque's solution of Chlorinated Soda, and can not percieve that the Bromine preparation possesses any valuable properties which the Chlorinated Soda has not. Both destroy the disease when applied to it, but the Compound Solution of Bromine causes the most pain, does not appear to be any more active than the Chlorinated Soda solution in full strength, and very readily loses its Bromine by vaporization, if not quickly and cautiously covered with a cerated cloth.

Pure, unadulterated Bromine seems endowed with special qualities which entitle it to more confidence than we can bestow upon any other agent with which we are acquainted. The vapor, when brought in contact with the odoriferous emanations of gangrene, at once destroy their odor, and probably their specific gangrenous character. When thoroughly applied in sufficient quantity to a gangrenous sore, it at once obliterates all gangrenous odor, and no gangrene appears afterwards, unless the wound receives a new infection from gangrenous matter, allowed to come in contact with it. Its steady vaporization permits it to be applied to the bottom of sinuses and sulci, which cannot be safely laid open with the knife,and which are very common with the patients of this Hospital, and its prompt, almost instantaneous action precludes the necessity of a prolonged use of the remedy, while sufficient experience in its use shows that it may be applied directly to the

covering of a nerve, or the periosteum, without destroying their vital integrity.

Contagiousness.—Hospital Gangrene is produced by infection upon an exposed surface. Several cases have come to us with the disease following the application of a blister, as well as in bed-sores. One, where the arm was broken, badly-adjusted splints produced abrasion, and gangrene followed. One man acting as nurse to his Captain, who had gangrene, had a little spot of inflammation on his ankle, caused, possibly, by musquito bites, which he had rubbed the skin from, he also had little scratches on his fingers. Gangrene set in at all these points, and he may yet lose his life as the result. In one case at Officers' Hospital, an officer with gangrene occupied a room alone. The carpenters wished to put a water pipe in it, and he was removed into a room where there were three other officers with wounds not then gangrenous. All four had their wounds exposed and dressed, and the gangrenous odor pervaded the apartment. Although the officer was returned in an hour, the next day gangrene appeared in the wounds of all three who had been exposed to the infection. Instances have often occurred in this Hospital where wounds that have been free from gangrene for several days, became again diseased, doubtless from renewed infection, received from others laboring under the disease.

To guard against infection we have made free use of Chlorinated Soda, Chloride of Lime, a solution of the Per-manganate of Potassa, Chlorinum, and Bromine, as well as scrupulous cleanliness and free ventilation. Each patient is supplied with his own drinking cup, and other utensils, and his own sponges; if he has two wounds, and only one is gangrenous, each wound has its sponge, and they are kept as clean as pos sible. If the nurses, dressers, or surgeons, have wounds or abrasions about their hands, Bromine is applied, and then the hands exposed to the virus without fear. In cleansing a very bad gangrenous sore, the scissors were found to be dull, and while sharpening them I cut out the ball of my left forefinger.

I applied Bromine and the wound healed kindly and readily. Nearly every day I have had cuts, pricks, scratches, or other abrasions on my hands, which are fully exposed in dressing the wounds, and in the dead house, and with no unpleasant consequences, I have always applied Bromine to the denuded surfaces before exposure, and am thoroughly convinced that the virus of the dead house, as well as other animal poisons, is entirely destroyed by the action of Bromine.

General Treatment.—The constitution seems to require much more than the usual amount of nutriment in this disease, and it is only after considerable poison has been absorbed, and the heart and lungs have become affected, that digestion and assimilation are deranged. It is true that the *temperature* of the entire body is almost invariably below the normal standard. During the month of August the thermometer ranged in the wards of this Hospital, at 2 o'clock, P. M., at from 98° to 103°, and yet the average temperature of the patients at the same hour, as indicated by the thermometer in their axillar, was but 89°. The average daily temperature of Sergeant Wilkie, who died from pyæmia, after secondary hæmorrhage, was only 74° and that of Private T. D. Riggs, who had gangrene of the right calf, extending down the tendon to the heel bone, was 84°. The pulse of the former averaged 114 beats, and that of the latter 88 beats in a minute This low state of temperature led us to a very free use of alcohol, in the form of ale, porter, whisky, and brandy, usually given once in two hours, and as much nutriment, beef, eggs, etc., as the patient would take. A very marked desire for acids prevailed, which was gratified by giving pickles, cucumbers, citric acid drinks, and acid fruits. After the disease had progressed to the serious invasion of the general system, (and most of our patients were *old* cases brought from other hospitals to die,) a very persistent diarrhœa was common, and that was about the only condition that demanded active medication. We carefully avoided the use of cathartics and opium, and as a soother to nervous and febrile excitement, in place of the opiates, used Hoffman's

Anodyne. In some cases distinctly complicated with miasm, (and most of the patients came from the vicinity of Vicksburg where they had been exposed for months,) we gave the Sulphate of Quinia. One or two doses of ten grains each was, usually sufficient.

Conditions Favoring the Appearance of Gangrene.—While no certain *cause*, except contagion, for the disease has been determined, it is evident that a depression of the general vital forces have been favorable to its accession. Fourteen (14) out of forty-six (46) of our patients were secession prisoners, and I think that all of the seven at Officers' Hospital, were also prisoners, a much larger number than a fair proportion, proving that exposure, privation, and consequent depression of the vital forces, is a condition favoring the appearance of the disease.

Post Mortem Appearances.—The tables compiled from the Hospital Records, and the reports of individual cases, furnished by Cadets Gunn and Lloyd, together with the learned and able report on the Pathology of the disease, by Surgeon Weeks, who has had unusual opportunities for the study of gangrene at Louisville, Vicksburg, and at this place, preclude the necessity of any extended remarks on this branch of the subject. We have made examinations in every case, with one or two exceptions, of those who have died here, and have observed a very uniform set of conditions. In all we have found thrombi in the heart, some of which have been very large. In one we found a thrombus in the thoracic duct, and I regret that we did not examine that passage in the preceding cases. In one case of long standing, the heart thrombus was softening and the walls of the heart were tainted with gangrene. In another case, where the disease was of still longer duration, the heart thrombus was considerably broken down and liquified, and the walls of the heart very much softened, flabby and decidedly gangrenous.

The lungs in each case were spotted with dark specks, and on being cut into, it was observed that the smaller arteries

were often completely filled with small thrombi and dark matter, evidently the debris which had been washed away from a thrombus in the heart, and become lodged in the smaller vessels. The disease was said to have been unusually malignant and rapid here. In no cases have I perceived any collections of pus, or softening of matter, said to have been observed in the lungs of those who have died of gangrene elsewhere.

Curability of Gangrene.—This disease, like Syphilis, in its earlier stages seems to be entirely local, and completely curable, when the parts affected are not vital organs, which has never been primarily in any case that has come under my observation, and when all the parts affected can be reached by direct application of the remedy. But the *secondary* affections, as the thrombi in the heart, the pulmonary complications, and the change in the fluids, which are sometimes called *Pyæmia*, are conditions which do not seem controllable by remedies. We have often had cases recover after the heart, the lungs and the blood had become seriously implicated. But gangrene can be considered certainly curable only in cases where the system has not become seriously affected by disease. In all simple cases gangrene seems as curable as a burn, scald or any other sinus wound.

General Treatment.—No remedy has yet been presented to us, that has apparently any marked or positive curative power over the constitutional and organic derangements produced by the absorption of the poison of gangrene. We saturate the air of the wards of the Hospital with Chlorine, and we have given Bromine internally for days and weeks, and while we do not know for a certainty that this course has proved beneficial to our patients, yet we should hesitate to deprive them of even the possible benefits arising therefrom. Pure air, full nutrition, alcoholic preparations, repeated as often as once in two hours, hope, cheerfulness, and immediate removal of all causes of pain, distress, uneasiness, and fretfulness, (for gangrenous patients are very childish,) and perfect cleanliness of the person and the bed, seem preferable to any form of perturbative medication.

CASES OF HOSPITAL GANGRENE

TREATED IN CHURCH U. S. A. MILITARY GENERAL HOSPITAL, DUR ING THE MONTH OF AUGUST, 1863.

[For Table, see next two pages.]

REMARKS.

1. Died of Pyæmia. Was moribund when admitted.
2. Transferred to Jackson Hospital, August 17th, 1863
3. " " " " " "
4. Now under treatment, wounds filling up.
5. Was infected when admitted. Sepsis and Thrombi formed on autopsy.
6. Transferred to Jackson Hospital, August 8th, 1863.
7. " " " " 4th, "
8. Lower Condyle of humerous is necrosed.
9. Transferred to Jackson Hospital, August 19th, 1863
10. Died of Pyæmia.
11. Thrombus in aorta. had Sepsis when admitted.
12. Died of Mechanical Pneumonia and Thrombus.
13. Transferred to Overton Hospital, August 24th, 1863
14. Under treatment now. Tendo Achilles involved.
15. Transferred to Overton Hospital, August 19th, 1863.
16. " " " " 21st, "
17. Still under treatment, had facial Erysipelas, August 8th, 1863.
18. Died of Diarrhœa. Wound was granulating since August 11th, 1863.
19. Transferred to Overton Hospital, August 5th.
20. " " " " 21st. Deep pereneal fascias sloughed or come away.
21. Mechanical Pneumonia and Sepsis when admitted
22. Pyæmia, had infection when admitted. Wound did not granulate.
23. Transferred to Union Hospital, August 4th.
24. " " " " 5th.
25. Still under treatment.
26. Admitted 1st August. Moribund. Died the 2d, of Secondary Hemorrhage.
27. Reappeared Aug. 19, wound was granulating from 13th to 19th of Aug.
28. Died of Pyæmia.
29. Transferred to Gayoso Hospital, August 19th.
30. Reappeared Aug. 19th, had no bromine, used nitric acid—will die.
31. Secondary hemorrhage in the night.
32. Transferred to Adams Hospital, August 17th.
33. " Webster " " 21st.
34. Still under treatment.
35. Bromine not applied to all, was burrowing. Died from Thrombus in left Auricle weighing 482 grains and occluded auriculo ventricular opening.
36. Transferred to Webster Hospital, August 23d.
37. Still under treatment.
38. " "
39. " " His condition is doubtful.
40. " "
41. " "
42. " "
43. " " Same as No. 24, relapsed and returned.
44. " " Ball removed from tibia, was in cancellus structure.
45. " "
46. " " Has Sepsis.

Compiled by Surgeon Geo. R. Weeks, U. S. A.

Cases of Hospital Gangrene treated in Church U. S. A.

No	Name.	Rank	Regiment.	Co	Where wounded	When.	Tissues Involved	Region of wound.
1	Miller, Jos. T....	priv.	33d Iowa	F	.....	.....		right thigh.
2	Cooms, Reuben..	corp	" "	C	Helena, Ark	July 4		dorsal region.
3	Nelson, John....	priv	6th Mo	D	Cham'n Hill	May 16		left heel.
4	Graham, Sandf'rd	"	33d Iowa	C	Helena, Ark	July 4		left arm & side
5	Johnson, Oliver..	"	" "	C	" "	"		right elbow.
6	Arbuthnot, Saml.	"	28th "	F	" "	"		left hand.
7	Louis, Fredrick ..	"	1 Ind Cav	F	.....	.....		right hand.
8	Whitaker, John..	serg.	33d Iowa	E	Helena, Ark	July 4		left elbow joint
9	Pfister, George...	priv.	48th Ohio	C	Vicksburg	May 22		left knee.
10	Hughes, Elijah...	"	4th Va.	I	"	May 19		left loin.
11	Beauer, Jas. A...	"	33d Iowa	A	Helena, Ark	July 4		right instep.
12	Frank, John.....	"	6th Mo.	F	Vicksburg	July 15		right shoulder.
13	Oxford, John....	"	3rd Ark.	K	Helena, Ark	July 4		right thigh.
14	Dorton, Lafayette	"	9th Mo.	B	"	"		right calf.
15	Riggs, T. D.....	"	Ha'thorns	I	"	"		left foot.
16	Coulter, B. F....	corp	Bell's Ark	K	"	"		right heel.
17	Bryon, Robert...	priv.	8th "	D	"	"		left thigh.
18	Gray, John.....	"	2d "	C	"	"		left leg.
19	Twitnan, D. L...	"	8th Mo.	I	.....	.....		right thigh.
20	Harris, W. H....	"	33d Iowa	C	Helena, Ark	July 4		right thigh.
21	Butumbaugh, M..	"	99th Ill.	C	Vicksburg	May 22		left thigh.
22	Wilkie, August..	serg.	33rd Mo.	H	Helena, Ark	July 4		right knee.
23	Graham, Robert..	"	" "	E	"	"		right arm.
24	Goff, William....	priv.	33d Iowa	I	"	"		right leg.
25	Alt, Michael.....	"	26th Mo.	F	Cham'n Hill	May 16		right leg.
26	Ijames, V. M.....	"	Harts Ark	—	" "	.....		left dorsum.
27	Cole, G. A.....	"	7th Mo.	K	Helena, Ark	July 4		left ankle.
28	Alexander, John.	"	33d Iowa	E	....	.....		loin.
29	Holzimu, Wm...	"	12th Mo.	H	Vicksburg	May 22		left thigh.
30	Sullard, J. A....	"	7th Mo.	A	Officers Hos	Aug 1		right ankle.
31	Campbell, John A	corp	81st Ill.	H	Vicksburg	May 22		left hand.
32	Fuller, S. W.....	"	26th Con.	A	Port Huds'n	Jun 14		right ankle.
33	McEvoy, James..	priv.	7th Mo.	D	Raymond	May 12		right arm.
34	Cloud, Allen.....	"	22d Iowa	H	Vicksburg	May 22		left arm.
35	Millceps, C. F...	"	18th Ark.	G	Port Huds'n	May 27		right thigh.
36	McClure, Samuel.	"	83d Ind.	H	Vicksburg	May 19		stump left leg.
37	Butler, John M..	"	5th Iowa.	D	Cham'n Hill	May 16		stump right leg.
38	Onert, Peter.....	"	124th Ill.	F	" "	May 16		left thigh.
39	Goodrich, I.....	"	5th Mo.	E	Helena, Ark	July 4		gential & dorsil
40	Waters, A. M....	"	Bell's Ark	E	"	"		left thigh.
41	Scott, James....	"	1st Mo.	A	"	"		right thigh.
42	Watts, L. L....	"	1st Ark.	D	"	"		left shoulder.
43	Goff, William....	"	33d Iowa	I	"	"		right leg.
44	Brickerhoff, B...	"	47th Ohio	K	Vicksburg	May 19	tibia	left leg.
45	Grant, F. M.....	"	3rd Iowa	E	"	Jun 22		right calf.
46	Witby, T. T.....	"	29th Iowa	F	Helena, Ark	July 4	bone	stump ri't thigh

cel & bone mus integ knee joint

mus integ and bone.

Military General Hospital, during the month of Aug. 1863.

When Gangr ne began.	Wh·n admitted	When arrested.	Duration in this Hospital.	Local Treatment.	Gen'al Tr at-ment.	Died.	Convalesced.
.....	July 30	.....	.....	chlo. soda.	Tonics. skin and nut. diet.	Aug 8	... .
July 28	" "	Aug 10	1 day	bromine, Aug. 9		.....	convalesced
" 25	" "	" 12	2 "	" " 10		.....	"
" 10	" "	" 11	1 "	" " 9		.....	"
" 10	" "	" 12	2 "	" " 10		Aug 13	.....
.....	" "	.....	.....	chlo. soda.		.....	convalesced
.....	" "	Aug 3	.....	sul zinci. chlo. soda.		.....	"
Jul 19	" "	" 10	1 day	bromine, Aug. 9		.....	"
" 25	" "	" 10	1 "	" " 10		.....	"
Jun 27	" "	not arres'	.....	nit acid and nit aly.		Aug 2	.....
July 17	" "	Aug 12	3 days	bromine, 9, 10, 11 Aug		" 18	.....
" 20	" "	" 6	.....	nit acid and chlo. soda		" 8	.....
" 20	" 31	" 11	1 day	bromine, Aug. 10		.....	convalesced
" 10	" "	" 13	2 "	" " 11		.....	"
" 12	" "	" 10	1 "	" " 9		.....	"
" 24	" "	" 12	2 "	" " 11		.....	"
" 28	" "	" 13	2 "	" " 10		.....	"
" 22	" "	" 11	1 "	....		Aug 23	.....
.....	" "	.....	.....	bromine, Aug. 9		.....	convalesced
July 20	" "	Aug 10	1 day	" " 9		.....	"
" 27	" "	" 10	1 "	" " 10, 11		Aug 14	....
" 10	" "	" 12	2 "	chlo. soda.		" 17	.....
.....	" "	.....	.....	chlor'te soda & nit acid		.....	convalesced
.....	Aug 1	Aug 5	1 day	bromine, Aug. 10		.....	"
July 22	" "	" 11	.....	per sul. ferri.		.....	"
.....	" "	.....	4 days	bromine, Aug. 9		Aug 2	... .
July 25	" 2	Aug 13	.....	nit. acid and chlo. soda		" 21	.....
.....	" "	....	3 days	bromine, Aug. 9		" 7	..... .
July 22	" "	Aug 12	4 "	" " 9, 12		.... .	convalesced
Aug 1	" 5	" 13	4 "	" " 8, 10, 11, 12		.....	.....
May 30	" 8	" 12	1 "	" " 10		Aug 13	.....
July 25	" 9	" 11	1 "	" " 10		.....	convalesced
" 20	" 10	" 11	7 "	com sol bro fro 13 to 20		.....	"
Aug 4	" 13	" 20	... ..	" 14 15		.....	"
" 8	" 14	.....	2 days	" Aug. 16		Aug 27	.....
" 8	" 15	Aug 18	4 "	" " 16		.....	convalesced
July 20	" 15	" 20	1 "	" " 28		.....	"
Aug 1	" 22	" 28	. ....	" " 26		.. ..	"
" 20	" 24	wo'nd bet	2 days	" " 25		.....	.....
" 10	" 24	Aug 27	1 "	" " 25		.....	convalesced
" 4	" 24	" 26	1 "	" " 25		.....	"
" 10	" 24	" 26	1 "	" " 27		.....	"
" 15	" 26	" 28	.....	" " 28		.....	.....
" 15	" 26	look bet.	.....	" " 28		.....	.....
" 16	" 28	" "	.....	" " 28		.....	.....
" 1	" 29	" "	.....	" " 28		.....	.....

CLINICAL LECTURES ON DISEASES OF THE EYE.

By E. L. HOLMES, M. D., of Chicago,

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CONJUNCTIVITIS AND ITS TREATMENT.

GENTLEMEN:

The characteristic symptoms of catarrhal conjunctivitis, uninfluenced by constitutional disease, are congestion and swelling of the conjunctiva with increased secretion. These symptoms vary in intensity in different cases. They are usually first observed in the conjunctiva of the lids, and in the semi lunar fold, the sclerotical portion being last affected. The severity of the disease can almost always be measured by the severity of these *three symptoms combined.* Very marked redness or swelling alone is not necessarily a bad symptom. Pain, photophobia, and a sense of heat are not present except in severe or protracted cases. When observed, they indicate complications with the cornea or other important tissues. Instead of pain, there is a feeling of irritation, as if there was fine dust between the lids and globe; this sensation is caused by the enlarged vessels of the palpebral conjunctiva rubbing upon the cornea. The patient generally experiences but little discomfort from light, unless it be artificial or too brilliant. Continued use of the eyes invariably causes uneasiness. The secretions in the commencement of the attack consist principally of tears; the quantity of mucous gradually increases and collects at the internal angle. The presence of this mucous spread upon the cornea causes the obscured vision, of which patients complain. On account of the diffraction of light produced by the thin strata of mucous on the cornea, objects seem

indistinct and the flame of a candle appears surrounded by a globe of light.

The causes of Catarrhal Conjunctivitis are not always readily discovered. Injuries, the action of winds and dust, and especially exposure to changes of temperature are among the most common causes. The eruptive diseases, as small pox, measles, and scarlatina, independent of their direct influence in their earlier stages, sometimes seem to predispose the patient, even after recovery, to inflammation of the conjunctiva, especially when exposed to cold and dampness. A scrofulous diathesis is a strong predisposing cause.

The course which catarrhal conjunctivitis pursues, depends upon the treatment and the manner in which the patient can protect himself from exciting agents. It sometimes passes rapidly into the muco purulent form, causing speedy destruction of the cornea. The course most common among the poorer classes is such as you have seen in quite a large number of patients in the clinic, afflicted with "granulated" lids, vascular cornea, atrophy of the conjunctiva, entropion, ectropion, trichiasis, opacity of the cornea and even total blindness.

The history of these cases, in many respects, is almost invariably the same: A poor laborer, or a poor woman, surrounded with a large family, from the very nature of their occupations subjected to every kind of exposure, and from ignorance or carelessness always violating the laws of health, is attacked with the simple catarrhal inflammation. As "it is nothing but a little cold," the vain hope is cherished that it will pass away in a few days. The patient continues his work and the symptoms increase in severity. The fear of the expense attending medical treatment induces him to seek relief in the indiscriminate use of astringent solutions. Finally, he is forced, by necessity, to apply for medical aid, and remains under his physician's care only till he is able to resume his work, without being completely relieved. The eyes, now much more susceptible to irritating agents, soon relapse into a worse condition, if possible, and in this way the afflicted pa-

tient is forced to labor for the support of himself and family, seeking medical aid only when threatened by blindness. After months, or even years of misery, the poor patient is left in poverty with vision more or less impaired for life. Few diseases, so simple in the beginning, cause, by neglect, so much misery as this class of inflammatory affections of the conjunctiva.

The treatment with patients of good constitution is almost entirely confined to the removal of irritating agents and to the proper local use of astringent caustics and antiphlogistics. Of the active remedies, the caustic astringent in the great majority of cases are of most importance.

In the ordinary mild cases, where there is little redness, swelling or heat, it will usually be sufficient to direct the patient to bathe the eyes frequently in tepid water, and to use two or three times daily a solution of Arg. Nit., gr. ij—iv and Aquæ Distil., ℥j; or of Zinc Sulph., gr. iij—vi and Aquæ Rosæ, ℥j. A couple of drops should be introduced between the lids and globe. Use of the eyes and exposure to winds and dust should be avoided.

If, however, the symptoms are more marked, it is advisable to use cold water, applied *constantly* to the eyes, by means of wet compresses, changed every few minutes. At the same time a solution of Arg. Nit., ten grains to the ounce, should be used once daily in the manner I shall soon describe. In private practice, especially among the poorer classes, there are objections to the use of cold water, since patients neglect to change the compresses sufficiently often. They become warm, and the frequent change from warm to cold compresser counteracts the good effects of the application. Except where patients are intelligent and careful to observe directions, it is, perhaps, more prudent to omit cold applications.

In the severer cases, I recommend the following plan of treatment, which I have used with great success. I direct the patient to avoid every thing that can irritate the eyes; to use nourishing, but simple food in moderate quantities; to take

once in twenty-four or forty-eight hours, according to circumstances, a small dose of Sulphate of Magnesia. I think advantage is gained by the use of three or four drops of Tinct. Verat. Viridis every three hours till the pulse is reduced somewhat below its normal rate. I apply directly to the conjunctiva, in the following manner, a solution of arg. nit. gr. x—xx to the ounce, according to the severity of the case. After turning the lids and drawing them apart to expose as much as possible of the conjunctiva, I press a small piece of dry linen upon the surface to remove the mucous and moisture. By means of a short and soft camel's-hair pencil of considerable size, completely moistened and yet not saturated with the solution, I paint the surface of the conjunctiva till the characteristic white appearance produced by nitrate of silver is produced. It is well to apply the linen once more for the purpose of absorbing the solution which has not united with the tissues. The solution should be applied once daily, being reduced in strength as the symptoms improve. The eyes should be carefully cleansed by frequently but gently washing them with tepid water. I believe strong solutions, simply dropped between the lids, not only often fail to do good, but even produce injury. I think it is of great importance that the solution should be applied uniformly over as much surface as possible.

I seldom use nitrate of silver in a weaker solution than ten grains to the ounce. I prefer to apply this solution in the way just described, even in mild cases. I have never seen any evil results, and think patients make more rapid recoveries. In the same manner I apply stronger solutions of nitrate of silver in cases of muco-purulent conjunctivitis, so often found by thousands, in the different European armies, in our crowded asylums for indigent children, and so prevalent in the Northwest as an epidemic disease; also in gonorrhœal ophthalmia and in the conjunctivitis of new born children. You must remember that these diseases often run a rapid course, destructive to important tissues of the eye. They require active treatment and careful watching.

On account of the great pain and swelling, it is frequently necessary to place the patient under the influence of chloroform. The solution of nitrate of silver, not less than twenty grains to the ounce, should be applied somewhat more freely than in milder cases, by passing the brush several times over the conjunctiva. Immediately after the application of the caustic, the conjunctiva should be extensively, though not too deeply, scarified by means of a sharp knife. The depth of incisions should depend upon the degree of swelling. In these cases ice water compresses are almost absolutely necessary. Day and night it is the imperative duty of the attendants to change the compresses every few minutes. That the patient may not be too much disturbed by pain and discomfort, it is advisable to administer suitable doses of morphia. Veratrum viride, I think, controls to a certain extent the inflammation. The patient should be confined to a room of moderate temperature, and in severe cases should be placed in bed.

The conjunctivitis of new-born children claims your special attention, as it is by no means an uncommon disease, and when neglected often terminates in the loss of sight. Unfortunately, mothers and nurses too frequently regard the affection of of trifling importance and neglect medical treatment, until the symptoms have become alarming. In the earliest stages of the disease, before the discharge and swelling had become marked, the disease can almost invariably be arrested by strict attention to cleanliness, and by the use, three or four times a day, of nitrate of silver, two to four grains to the ounce of water. But where the disease has been suffered to run its course for several days and there is copious discharge of thick pus, with a swollen, granulated conjunctiva, it is necessary to apply the stronger solutions and to scarify the conjunctiva as above described. In very severe cases the constant application of ice water is of great advantage. But this is often attended with certain difficulties arising from restlessness of the little patients. Where it is absolutely necessary to employ ice water, I usually give once in two or three hours five or

ten drops of a solution, composed of an ounce of water and a quarter of a grain of Sulphate of Morphia. The patient is thus kept quiet and is not disturbed by changing the compresses.

I need scarcely remind you how important it is to avoid bringing the smallest quantity of the purulent discharge from the eye in contact with the healthy conjunctiva. When one eye alone is affected, it is always prudent to protect the other by covering it with dry lint and strips of delicate plaster painted with collodion.

I have given you a brief statement of what I believe to be the most reliable treatment of acute conjunctivitis. I would refer you again to the translation of Græfe's Monograph on the use of caustics, published in Dr. Homberger's *Journal of Ophthalmology*. And I would urge upon you a careful study of the chapters on the Anatomy, Physiology and Pathology of the Conjunctiva in the works of Arlt and Stellwag. In the same works, as also in those of Lawrenee, Walton and Mackenzie, you will find excellent directions regarding the treatment of conjunctivitis.

SELECTED.

THE NEW UNITED STATES PHARMACOPŒIA.

THE CHANGES THAT HAVE BEEN MADE, WITH THE REASONS FOR SO DOING.

Dr. E. R. Squibb, of Brooklyn, N. Y., a member of the Committee for Revision of the U. S. Pharmacopœia, reported at the Academy of Medicine that the work had been published, and made in substance the following statements in relation to the changes that had been made, together with the reasons for so doing.

Weights and Measures.—In the department of weights and measures the following changes have been made. The terms pound, drachm (for other than fluids), and scruple are disused,

and all weights are expressed by the Troy ounce or grain. In writing for fluids the sign letter *f* should precede the ℥ or ʒ sign. The fluid measures are derived from the wine gallon. The term gallon is not used, its equivalent being expressed in pints. The use of the Arabic numerals is recommended as preferable to the Roman.

The Materia Medica list is divided into two sub-classes. I. Primary, and II. Secondary Lists. The first consists of those articles which are either of primary importance as remedies, or enter into the formulæ of the work, while the second class is formed of those which are of secondary importance and do not enter into the formulæ.

Chromic acid (acidum chromicum) is introduced as a valuable and self-limiting escharotic. Thus far it has been employed extensively in uterine diseases. It is applied through a speculum by a glass tube or a glass rod.

Lactic acid (acidum lacticum) is introduced for the purpose of making lactate of lime; and the *glacial phosphoric acid* is also placed in the primary list for the preparation of dilute phosphoric acid, a very valuable nervine tonic.

Fusel oil (Alcohol Amylicum) is introduced for making valerianic acid.

Aloes is divided into three varieties, I. Aloe Barbadensis, II. Aloe Capensis, and III. Aloe Socotrina, which is the best.

Ammonia alum (sulphate of aluminum and ammonia) is given for a choice as an ordinary astringent.

Aqua Ammoniæ fortior.—The term *aqua* is substituted for *liquor*, inasmuch as the former is intended to apply to a solution of volatile substances and the latter to fixed substances.

Belladonna Radix is added for the preparation of atropia.

Bromine is introduced to furnish the bromide of potassium, the reputed remedy for hospital gangrene.

Chiretta is added to the list of bitter tonics.

Chloroformum Venale.—Commercial chloroform is placed in this list to give an opportunity for prescribing the common article for external application, it being a great deal cheaper, and equally, for that purpose, as good as the pure.

Cinchona Flava.—The cinchonas are divided into C. flava and C. pallida, the flava (yellow) being the best.

Fermentum (yeast) is made officinal, that it may be written for in prescriptions; *gutta percha* is introduced for making the gutta percha collodion.

The Butter of Cocoa (Oleo theobromæ) is introduced as the best ingredient for suppositories.

Opium.—Opium must not be considered officinal unless it contain 7 per cent. of morphia.

Potassæ Permanganas is a most valuable disinfectant for carcinomatous growths, but hardly fit for anything else.

Saccharum lactis (sugar of milk) is introduced as a vehicle for alkaloids where it is necessary to divide very finely. It is very slowly soluble, and is by this means capable of disguising the taste of medicines.

Scammony must contain 75 per cent. of true resin to be officinal.

Sinapis (mustard) is divided into two varieties (white and black), both having different therapeutical properties.

Whisky (spiritus frumenti), and bay rum (spiritus myricæ) are officinal preparations. The former should contain 48 to 56 per cent. of alcohol, be free from odor, and be at least two years old.

Port and Sherry Wines are also officinal, the former is named Vinum Portense, and the latter Vinum Xericum.

Sulphur.—Sublimed sulphur is introduced to be used as an ingredient for ointments in cutaneous affections, inasmuch as it contains the sulphurous and sulphuric acid, which the washed rotund sulphur does not. This latter is used internally.

Alcohol Fortius (stronger alcohol) was introduced as a solvent for iodine and like substances.

Alcohol Dilutum is the stronger alcohol diluted one-half with water.

Aurantii flores is used for making the orange flower water, a useful substitute for the ordinary rose water.

Cadmium is introduced for making the sulphate of that metal.

Caffea (ground coffee) is added on account of its antidotal effect in opium poisoning.

Canna is an addition to the fecula.

Ferri Sulphuretum is introduced for making the sulphureted hydrogen, which is so frequently used as a test.

Leptandra is a remedy for trial. It is an emetico-cathartic, and eclectics contend that it is a substitute for calomel in its action on the lower and upper part of the canal.

Matico is also on trial as an aromatic tonic and stimulant. It possesses no astringent properties.

Nectandra has the properties of being antiperiodic and febrifuge. Its active principle is biberine, and is used in the form of a sulphate; it does not excite the circulation or the nervous system like quinine.

Sodæ Sulphis (sulphite of soda) is introduced as a convenient form of applying sulphurous acid in various cutaneous affections, where the pure acid is too irritating.

Syrupus Fuscus (molasses) is made officinal that it may be written for.

This completes all the new introductions into the primary list.

SECONDARY LIST.

Achillea (yarrow) is an antiperiodic and tonic. On trial.

Angelica is the root of the Angelica Archangelica, and not of the Angelica Atropurpurea.

Berberis (barberry), root of the berberis vulgaris, is a tonic and purgative.

Brayera (kousso) is the celebrated remedy for tape-worm. It is given in powder after a purgative, and while fasting.

Delphinium (larkspur), seed changed for the root.

Enonymus (wahoo), on trial as a diuretic and tonic. It destroys vermin in the hair effectually.

Gelseminium is an indigenous plant, and is said to be an energetic nervous tonic without astringent, nauseating, or purgative properties. There is claimed for it also the property of reducing the force and frequency of the pulse.

Gossypii radix (cotton root) is intended as a substitute for ergot.

Hydrastis possesses energetic tonic properties.

Rottelera (kameela) is a cathartic vermifuge, and may be used in lieu of kousso or pumpkin seed in tape-worm.

Scutellaria (scull cap) is an antispasmodic, and is considered as a specific for chorea. It is used in infusion.

ACETA.—*Acetum Lobeliæ* is a preparation which is the most convenient for preserving the active principles of the plant. The same may be said of *Acetum Sanguinariæ*.

Acetum Opii is changed in formula but not in strength.

ACIDA.—*Acidum Hydriodicum dilutum* is a valuable preparation of iodine when the stomach is irritable. *Acidum Muriaticum dilutum* is introduced for foot-baths, and should always be used fresh. *Acidium Phosphoricum dilutum* is a valuable nervous tonic. *Acidum Sulphurosum* (sulphurous acid diluted with water) is used as an application for the destruction of parasitic growths. *Acidum Valerianicum* is for making the valerianates.

ÆTHERA.—*Æther Fortior* is the pure ether, and *Chloroformum purificatum* the pure chloroform, both of which are used for anæsthetic purposes.—*Am. Med. Times.*

INVESTIGATIONS TOUCHING THE USE OF IODINE.

Dr. Rosenthal, assistant physician at the Vienna General Hospital, has published, in the *Wiener Med. Wochensch.*, a series of papers containing much original matter touching the therapeutic use of Iodine. The summing up is as follows:—

1. Large doses of iodide of potassium, combined with a small quantity of fluid, remain a long time in the economy; with large quantity of fluid, they are quickly washed away from the system and pass rapidly into the secretions and excretions. This circumstance should be carefully noticed.

2. When iodide of potassium is taken internally, it is found, not only in the urine, saliva, and other secretions, but also in the alvine evacuations, within from four to seven hours, whether the stools be aqueous or the reverse.

3. In the administration of iodide of iron, iodine is separated in considerable quantities and found with a large proportion of the iron in the urine. Fæcal matter contains much iron and a small amount of iodine. The same phenomena may be noticed when iodide of mercury is used.

4. Frictions with an ointment containing iodide of potassium upon sound skin will cause the iodine to be detached in the urine and saliva.

5. Iodine is found in the urine of those who take baths in which iodide of potassium is dissolved, even when the rectum and urethra are kept free from the action of the bath. This is proved by examining the urine, and by noting a large diminution of the iodine in the water used for the bath.

6. The intestinal mucous membrane takes of the iodine very energetically in the form of enemata, and this is the case even with very weak solutions of iodide of potassium.

7. Large doses of iodide of potassium, or small doses taken for a long time, are not well borne in certain pathological states of the economy; in fact, large doses of iodine, or concentrated solutions, are very prejudicial to the system.

ON FERMENTATION AS A CAUSE OF VARIOUS DISEASES.

M. Polli, of Milan, has recently published two very interesting memoirs on fermentation as a cause of various diseases, from which we extract some of the more important facts.

Chemists who have, of late years, investigated with the greatest success the phenomena of fermentation, have observed that this mode of reaction amongst organic principles has a much greater importance than was suspected. It is, in fact, to fermentation that the spontaneous decomposition of animal and vegetable tissues is due, such as gangrene, dry rot, eremacausis, etc., and the whole series of successive transformations that orgar ic substances undergo until they are converted into water, carbonic acid, ammonia and mineral matters. It is by fermentation that fatty bodies give glycerine; that salicine furnishes glucose; that myronate of potash is converted into essential oil of mustard; that neutral substances, such as urea and allantoin, form ammonia; that amygdaline produces the poisonous substances, oil of bitter almonds and hodrocyanic acid.

Ferments act by contact or by catalysis. Sometimes they are living creatures, sometimes very active substances which are not organized. Diastase, emulsine and pepsine perform the part of ferments. They may cause organic substances to double, become hydrated or isomeric.

According to M. Polli, there exists a great analogy between the processes of fermentation and many organic metamorphoses which occur in some diseases. An albuminous matter which in a particular state of alteration acts as a ferment, and particular substances which proceed from its action; this is the basis of the humoral theory.

But analogy is not sufficient of itself; it has been shown by carefully conducted experiments that the blood in disease undergoes alterations and variations in its composition, and that artificial disease may be produced bearing a strong resemblance to natural disease, by injecting into the blood-vessels substances which act as ferments. Multiple abscesses, induced by the injection of pus into the veins of dogs; septic affections caused by injecting purulent putrid matters into the veins of animals; diseases presenting all the characteristics of typhoid

fever, and caused by the injection of putrified blood into the circulating current; finally, contagious diseases, such as glanders, which is produced by the injection of glanderous humors, are facts which prove that a general affection may be induced by the simple introduction into the blood of a substance capable of acting as a ferment. The diseases which may be called catalytic, in which the morbific matter produces metamorphoses by contact with the alterable principles of the blood are the primary cause of all the symptoms presented by the animal economy. In short, it is impossible to deny that fermentation may be produced in the blood.

But admitting that the starting point of many diseases is the action of a specific ferment in the blood, is it possible to prevent its effects, to render it inactive in the living organism, as we may do apart from the body, by many chemical means? This is the great point which gives interest to this pathological question.

M. Polli believes that he has proved, by a series of facts and conclusive experiments, that it is possible to neutralize morbific ferments in the blood of animals by chemical substances which do not act in a manner incompatible with life; and it is by these substances that we must hope to treat successfully those diseases of which fermentation is the primary cause.

It is well known that sulphurous acid gas prevents alcoholic and acetic fermentation, and also the fermentation of animal substances and organic matters in general. Thus it arrests, if it be already begun, the fermentation produced by saliva and diastase in contact with starch, the fermentation which myrosine produces in the paste of black mustard flour, that which is produced by emulsine on the amygdaline of bitter almonds, etc.

M. Polli has proved that alkaline or earthy sulphites possess the same antiseptic and decolorizing properties. This is a very important fact, since it admits of the application of sulphurous acid in therapeutics. He thinks also, that he has ascertained that the action of sulphurous acid and of sulphites on coloring matters as well as on ferments, is neither a deoxygenation, a combination, nor a destruction, but simply a molecular modification.

This mode of action of sulphurous acid and sulphites explains the valuable property which these chemical compounds possess of preventing or energetically arresting the action of morbific ferments artificially introduced into the blood of ani-

mals, without altering its composition in such a manner as to be incompatible with life.

From a great number of experiments made upon dogs, and alluded to in his memoirs, M. Polli has determined the safe and efficacious dose of sulphites for internal administration, the changes which they undergo in the organization, and their curative action in the affections produced by the injection of putrid or contagious matters into the blood.

The following are some of his experiments, selected from those of the last-mentioned series:

1. Ten grammes of sulphate of soda were given to a dog during a period of five days, then one gramme of pus was injected into the femoral vein. The animal became dull, and refused the food which it was offered, but the next day its spirits returned and it ate willingly. Two days after, the same experiment was repeated and was followed by the same results. At the end of a few days the animal was perfectly cured.

2. One gramme of pus was injected in two portions into the veins of a dog of a more robust nature than that operated upon in the preceding experiment. The animal became spiritless, but the next day took some food; the following day it was very low, it breathed with difficulty, its wounds were sanious, its leg and foot swollen, and it died ten days afterwards.

3. An equal quantity of putrid blood was injected into the veins of three dogs; one died five hours after the infection, another after five days of illness, and the third, to which some sulphate of soda had been administered, after having experienced some trifling symptoms of illness, rapidly recovered.

4. Numerous other experiments made with putrid blood and morbific mucus proved that the animals died with all the symptoms of a general infection, whenever sulphite of soda was not administered, and that, on the contrary, they speedily recovered under its influence.

If these facts should be confirmed by other experiments, M. Polli will have rendered an inestimable service to therapeutics, and will have thrown some light on the yet obscure cause of numerous diseases.—*Pharm. Jour. and Trans.*, London, April, 1863, from *Journ. de Pharm. et de Chimie.*

NITROUS OXIDE AS AN ANÆSTHETIC.

The attention of the profession has been directed within the last few months, to this agent for the production of anæsthesia. It is claimed by those who have experimented with it, that it is very efficient, operating rapidly, almost as much so as chloroform, and with perfect safety; no serious accident yet having occurred from its use. Patients are as easily controled while under its influence as any other anæsthetic agent.

The manner of its action we conceive to be very different from that of chloroform or ether; during the administration of the latter, the tendency is to deprive the blood of the ordinary amount of oxygen, while the former increases it. While death even *might* ensue from asphyxia under its full influence, yet its operation upon the nervous system, and especially upon the nerve centres, is certainly attended with far less danger than chloroform or ether.

The manner of administering it seems to constitute the greatest objection to its general use. With appropriate apparatus it is easily prepared, but it requires large space; three to six gallons being required for each case. The apparatus and mode of administration are being simplified, and it is presumable that this will be so far accomplished, that there will be no special objection in this direction. All the apparatus, with instructions for using it, is furnished by parties in New York, and other points. We hope all who have opportunity will experiment and report. T.

SUGAR AS AN ANTHELMINTIC.

M. Debout says that sugar is an excellent destroyer of worms. He once accidentally put sugar instead of salt on a leech which he wished to detach from the skin, and was surprised at the spasms produced by it. He therefore tried sugar on earth-worms, and found it had a similar powerful effect; and has since used it in solution with success as an injection in children.—*British Med. Journal.*

ON AN IMPROVED MODE OF USING

REFRIGERATION AS AN ANÆSTHETIC AND AS A REMEDY.

By JAMES ARNOTT, M. D.

It is now, I believe, universally admitted that, by the application of intense cold, pain may be certainly prevented in the numerous operations in which the incision is confined to the skin and the superficial textures; and few will dispute that, in these operations at least, its perfect safety gives it a great advantage over ether or chloroform. But the general opinion is, that it is more troublesome to use than chloroform, and that it is more apt to fail in producing anæsthesia from some oversight or error in the application. This idea has prevented many from employing refrigeration, except in cases where the patients have objected to chloroform, or where there was more than the ordinary risk from its use. In hospital practice, the longer time occupied in effecting congelation has made chloroform to be preferred in almost every case. In consequence of this, many deaths have occurred from the administration of the latter in the most trivial operations—in the extraction of a toe-nail, the opening of an abscess, or the cutting off a wart.

There is nothing singular in this objection, arising from the supposed difficulty or trouble in the use of intense cold. Some of our most valuable remedies have only become generally adopted when the mode of administering them has been simplified. Artificial respiration, galvanism, and several measures resorted to in the treatment of stricture and stone, may be adduced as examples. But the most striking instance of this is found in a therapeutical agent more nearly connected with our present subject. Although sulphuric ether, when properly employed, is not inferior as an anæsthetic to chloroform, the greater trouble attending its administration would have probably very much lessened the use of etherization, had no easier mode of effecting it been discovered. Chloroform is more dangerous than ether, and has on this account been banished from some of the principal hospitals in North

America and France, yet so much valued by the great majority of surgeons is its greater ease of administration, that the honor of discovering this means of facilitating anæsthesia has been almost as keenly contested as that of the great discovery of etherization itself.

Congelation has hitherto been generally produced by placing the freezing materials on the part to be benumbed. In order to ensure success, care must be taken that the ice shall be well pulverized and rapidly mixed with the salts constituting the frigorific. The mixture must be applied by means of gauze, or some other thin permeable material; and when the part is not in a horizontal position, a gutta-percha cup fitted to it may be required to keep the frigorific in contact with the skin. Now, all this trouble may generally be avoided by the adoption of an expedient similar to that employed in the therapeutical application of extreme heat. It is rarely the case that a burning substance is applied directly to the part; instead of this, an iron, which has been previously heated in the fire, is used. In a similar way, an iron, or a brass, or a copper implement, of appropriate shape, may be previously cooled in a freezing mixture, and applied with the greatest accuracy to any accessible part, in whatever position this may be. A small, flat, laundry iron, which may be used for pounding the ice, will also answer in a great many cases as the refrigerator. If an extensive or continued refrigeration is required, two such irons, immersed in a semi-fluid mixture of two or three pounds of ice and salt, may be necessary to replace each other, just as two hot irons are often required for cauterization.

When a metallic body of this description has been cooled to below zero of Fahrenheit, it will often arrest the circulation of the skin the instant it touches it; but more frequently it must be moved and gently pressed on the part for a few seconds, so as to bring a continuous fresh surface in contact with it while the blood-vessels are compressed.

Another expedient, partly resembling that just described, and partly that hitherto in use, consists of a thin metallic bottle, (tinned iron or aluminium,) completely filled with the frigorific mixture. A Florence flask will sometimes answer the same purpose.

I think the above description is sufficiently minute, and that the surgeon, by the adoption of this method, will no longer have to complain of difficulty or trouble in using congelation, either entirely to prevent pain in minor operations, or to pre-

vent the more acute portion of pain, or that arising from incision of the skin, in operations of a deeper or severer kind. In the preface to his work, entitled "Ten Years' Operative Surgery in the Provinces," Mr. Prichard states, that he "refuses chloroform in the lesser operations wherever ice and salt can be conveniently applied." By means of the metallic refrigerator almost every part will be accessible. The complaint made by Messrs. Perrin and Lallamand in their recent and very complete work on "Surgical Anæsthesia," that congelation has been too much restricted to certain operations, will probably, by this improvement of the process, have no longer any foundation; but that, if I may be allowed to use the words of these writers, "on peut prévoir le moment où, grâce à la réfrigeration, l'anesthese pourra être étendue à toute la pratique usuelle de la chirurgie" (page 651).

It is not, however, in being a safe anæsthetic that the principal value of congelation consists. I am anxious to see it employed as a prompt and certain antiphlogistic in all accessible inflammations. The extraordinary remedial powers of congelation in the various forms of chronic rheumatism, which I have related in former publications, may be attributed partly to its anæsthetic and direct antiphlogistic virtues, and partly to the peculiar counter-irritation which it excites. As promptness of action is eminently characteristic of this remedy, it would be especially serviceable in many of those inflammatory and painful diseases to which soldiers and sailors are liable, and which are at present cured with so much difficulty as to render them long unfit for their duties. Amongst these may be reckoned sprains and inflammatory affections of the joints, wounds, irritable ulcers, headache, lumbago, and other painful affections, inflammation of various glands, ophthalmia, erysipelas, and other diseases of the skin.

Being convinced, from no little experience, that a short application of intense cold, produced by a frigorific mixture of appropriate strength, constitutes a certain and speedy remedy of every accessible inflammation, as well as a means of preventing pain in operations, without the risk of sudden or (which has been much more frequent) consecutive death attending chloroform, I do not deem that portion of my time misspent which has been employed in devising and describing such a simple and easy mode of making this application as may lead to its general adoption.—*Med. Times and Gazette.*

AN EASY METHOD OF REDUCING A DISLOCATED HUMERUS.

Dr. Garms describes the following modification of Cooper's procedure. The patient is laid upon the floor, not on his back, but on his belly, some cushions intervening. A towel is attached to the humerus above the elbow, and another, passed round the upper part of the humerus, is given into the hands of the assistant, standing on the side of the dislocated arm. The operator, sitting down on the floor, on the same side, lays hold of the lower towel, and applies the heel of the foot lying nearest the patient to the axilla. He makes extension backwards and downwards, while the assistant draws laterally. The dislocation is thus reduced with surprising facility, the agency of chloroform not being required. The advantage of this modification is that extension backwards may be far more easily executed than when the patient is in the supine position; and this is the direction required in dislocation forwards, which prevails in the great majority of cases. For dislocation backwards, which is very rare, Cooper's is the best.—*Brit. and For. Med.-Chir. Rev.*, July, 1863, from *Archiv. der Heilkunde*, No. 2, 1863.

AMAUROSIS FOLLOWING PARTURITION.

Dr. Eastlake communicated to the Obstetrical Society of London, (April 1, 1863,) a case of this. This phenomena had occurred on seven previous occasions under the same conditions, but it did not appear after the first labor. The patient was married, and thirty-four years of age. The blindness, which was total, occurred in both eyes suddenly about the third day after the birth of each child, and lasted on an average from three to five weeks. The patient had never lost more than the normal quantity of blood; she had never taken ergot; there was no suppression of the milk or lochia, nor was the urine albuminous. A careful ophthalmoscopic examination had been instituted, but the evidence adduced was entirely negative. Dr. Eastlake regarded the case as unique, and concluded his paper by stating that the only author who had described any case at all similar, was Beer, in his "Lehre der Augenkrankheiten."—*Lon. Lancet: Amer. Jour. Med. Sci.*

EDITORIAL.

To Our Patrons.—The present number commences the 21st Vol. of the CHICAGO MEDICAL JOURNAL, counting the aggregate of the different series The custom that has formerly obtained, when its proprietorship has been changed, of repeating the numbers of the volumes, but making them of a new series, has been productive of inconvenience, and we have therefore thought best, as making the reference to any particular article more easy, to number this volume in accordance with our whole issue, and we hope in future that this practice may not be changed. Few publications of any kind in the North-west have had a continued existence so long as this, and in the whole nation, but a small number of medical ones. It was established when Chicago was but an inconsiderable town, and the garden of the North-west but little inhabited. It has witnessed the transformation of this small town into a substantial city of more than 150,000 inhabitants, and with a business greatly disproportionate to the number of its people. It has seen the then unoccupied virgin prairies, fructified by the touch of industry, suddenly teeming with vast wealth, and inhabited by a numerous people, unsurpassed for intelligence, enterprise, courage, and fidelity to their country. In the profession, it has witnessed changes of a no less salutary nature, and of equal magnitude, with the material resources of both city and country. The JOURNAL has been a medium of communication between members of the profession embraced in a wide extent of country, and to the very marked progress made during this period, in scientific attainment, in medical knowledge, and practical skill, it may justly claim to have contributed its share of influence. We predict that the two decades to come will bring progress no less marvelous than the

two that are past, have shown--and with those who shall carry on this work, the JOURNAL will be a faithful co-laborer, as in times gone by. We are under great obligation to the profession for the steady support they have always so generously accorded us. Our list of subscribers has constantly increased, while remittances of pecuniary aid have been more and more prompt and universal.

We hope to make the current volume an interesting and useful one. We are promised a series of articles from Prof. Brainard on ununited fractures. We shall publish a series of Dr. Holmes' clinical lectures before the class of Rush Medical College, on the diseases of the eye, the first of which will be found in the present number. Other able writers have promised us contributions, and we solicit communications from all who will favor us by transmitting interesting articles for our pages. With this number we send bills for all dues up to the present volume—and though the bill for this is withheld, our patrons will not forget that our terms are *payment in advance.* Though most of our subscribers have paid with praiseworthy promptitude, yet a few are considerably in arrears. To all, this number will be sent, but those who have unpaid bills of much amount, and which shall remain unpaid on the issue of the next number, will have their names struck from the list, and the bills will be given to an agent for collection.

Pneumonia.—This disease has prevailed in the city to a considerable extent during the last two months. The sudden fatal termination of several cases at near the same time, in families of extensive acquaintance, led the public to believe that a new or unusual epidemic had appeared, which defied medical treatment. There is reason to suppose that treatment is sometimes too much influenced by the name of the disease. And in none, perhaps, is the error more pernicious than in pneumonia. When the symptoms and signs lead to the diagnosis of inflammation of the lungs—the mind at once reverts to the principles of treatment applicable to the phlegmasia,

and Venesection, Tartar emetic, Calomel, &c., are at once likely to be applied with an activity equaled to the intensity of the attack. The physician who has seen much of this disease in its adynamic type, will be at no loss to predict the result of such practice.

It has been our fortune to meet with a number of these cases recently, in all stages, from the first onset to symptoms indicative of impending collapse, and we have seldom been more forcibly impressed with the efficacy of the *sustaining* treatment than in this disease during the present season.

There is little room to doubt that the fear of tonics and stimulants in the early stage of inflammation, has allowed many patients to sink too low with Typhoid Pneumonia to be restored by any means. With us the conviction is firmly fixed, that the idea of *antiphlogistics* in the treatment of this form of pneumonia cannot be banished too soon from the mind.

We have in more than one instance seen the dry skin become relaxed and moist—the quick, hard pulse become slow and soft—the hurried and difficult respiration become free and regular—the dusky hue of countenance disappear and the clouded intellect become clear under the influence of Quinine, Opium, stimulants and a nutritious diet.

Two grains of Quinine with five grains Dover's Powders may be given every four hours—varying the dose, to meet the emergency of the particular case—after the first day or two stimulants may be added in quantity proportioned to the tendency to prostration of the vital forces of the system, and their effect upon the patient. When the surface becomes a little relaxed and the patient suffers pain then a blister over the seat of pain will afford manifest relief.

This is a hasty outline of the plan which with us has demonstrated that this serious disease which tends to rapid prostration, is amenable to treatment. We are forced to the conclusion that the physician will succeed best by omitting depressing agents, and not fearing to use sustaining remedies even in the early stage.

Vaccination and Re-Vaccination.—The increasing prevalence of Smallpox and Varioloid throughout the country is a sufficient reason for calling the attention of the profession, and through it, that of the public, to the importance of attending to *Vaccination* and *Re-Vaccination.* There is reason to believe that many persons have suffered unnecessarily, by reposing in a false security, they having been subjected to spurious vaccinia. The following "conclusions" enumerate the conditions, and the protective influence of a perfect vaccination:

In 1845, the Academy of Sciences of Paris published a Report, containing the following conclusions: 1. The protective influence of vaccination is complete as regards the great majority of the vaccinated, and temporary as respects a small number only; and in these latter it is almost absolute up to the period of puberty. 2. Smallpox rarely attacks the vaccinated before the age of ten or twelve; and it is from this age to thirty or thirty-five that they are chiefly exposed. 3. That in addition to its preservative influence, vaccinnation endows the constitution with an influence which renders the symptoms of small-pox much milder and of shorter duration. 4. Cow-pox, directly or recently derived from the cow, is attended by a much more intense local phenomenon, and by a more certain and permanent effect than that which has passed through a great number of human subjects, this intensity of local action subsiding after many successive vaccinations. 5. The preservative influence of vaccination appears not to be intimately connected with the intensity of its local effects; nevertheless, in order to preserve the properties of vaccinia unimpaired, it is prudent to renew it as frequently as possible from the cow. 6. Re-vaccination is the only means we possess of distinguishing the complete success of vaccinia from the less complete grades of protection. 7. Re-vaccination, however, is not certain evidence that the vaccinated in whom it had succeeded would have been destined to contract small-pox, but merely that it was probably among those that this latter malady was most likely to appear, if they became exposed to its infection. In ordinary times re-vaccination may be practised after fourteen years; during epidemic small-pox it may be practised after a shorter period.

The Morton Fund Association.—A systematic and determined effort is being made by the physicians of Boston, to obtain an appropriation by Congress, for Dr. Morton, the alleged discoverer of Ætherization, to reimburse him for outlays in discovering, defending his claim—and vainly endeavoring to obtain some pecuniary consideration, from the same source—and to remunerate him for the great benefits derived from the discovery, by the public and especially by our soldiers in the field. The association having the matter in charge comprises many of the leading physicians of Boston. They hope to influence the action of Congress by inducing physicians throughout the country to exercise their personal influence on the Representatives from their particular district. It will be well for Dr. Morton if Congress can be led to act upon the principle of the adage, "*Bis dat qui cito dat.*"

Resolutions of the Medical Class.—At a meeting held by the students of "Rush Medical College" for the purpose of considering the death of our fellow student, Mr. R. L. Smith, the following preamble and resolutions were presented and unanimously adopted:

WHEREAS, In the providence of God our young friend and classmate, Mr. R. L. Smith, has been by death removed from our midst, thereby suddenly cutting short, while in the midst of preparatory study, that hope of future usefulness cherished by himself and friends, therefore,

Resolved, That while we mourn his loss as a classmate and companion we will cherish his memory with much respect.

Resolved, That we tender our deepest sympathy to the family and friends of the deceased in this hour of their affliction.

Resolved, That a copy of these resolutions be transmitted to the father of the deceased; and also the "Chicago Medical Journal" for publication.

H. C. HOLLINGSWORTH,
G. B. LESTER,
J. W. THAYER,
J. A. WILLIAMS,
M. JENKINS,
} *Committee.*

Resignation of Professor Trousseau.—Prof. Trousseau has offered his resignation as Clinical Professor in the Faculty of Medicine which he has so ably filled for upwards of thirty years, being, he says, now turned of 62, and because to perform the duties of the chair, as he has always done, will demand an amount of labor for which his strength and activity will not much longer suffice. The students, however, are not willing to part with their professor, and have petitioned the Minister of Public Instruction not to accept the resignation.

An Agreeable Surprise.—The Medical Class of the Buffalo University recently presented their Prof. of Anatomy, Dr. Eastman, with a valuable horse, as a testimonial of their "regard for him as a faithful friend—a thorough teacher—and christian physician." Although "taken entirely by surprise," the Doctor accepted the token in very befitting terms.

Scarlet Fever in England.—London is at present suffering from a more formidable epidemic of scarlet fever than has prevailed there for upwards of twenty years, and the disease is rife all over England. Of the total number of deaths in London during the first eight months of the past year, one in every fourteen was due to scarlatina.

Number of Physicians in Chicago.—We see, by the *Tribune*, that the number of physicians in Chicago, at the close of the year 1863, was three hundred and twenty-two—about one to every five hundred of the inhabitants. This fact may be of interest to our professional brethren who are contemplating to locate among us.

Receipt for a Deep Black Ink.—The *Chemical News* gives the following recipe, which may be useful to our country readers: Take 14 ounces of powdered galls, 5 ounces of powdered gum Senegal, 6 quarts of distilled or rain water, 6 ounces of liquor of green vitriol free from copper, 1 drachm

of liquor of ammonia and 8 ounces of spirit of wine; mix these in an open vessel, and allow them to stand, stirring frequently, until the ink attains the desired blackness. This ink will not corrode steel pens.

Health of the Army.—The following extract comprises all that is said in the report of the Secretary of War to Congress, of the Medical Department of the Army:

By the report of the Acting Surgeon-General, the department is informed that the latest reports received give one hundred and eighty-two general hospitals, with a capacity of 84,472 beds. The number of patients remaining in general hospitals June 30, 1863, was 9-1 per cent., and in the field 4-4 per cent. of the entire mean strength of the army, of whom 11 per cent. were sick, and 2-5 per cent. wounded. The corps of medical inspectors, by the system of inspections established, has added materially to the efficiency of the medical and hospital service, and a marked improvement in all matters of sanitary precaution and police is exhibited. Companies of the second battalion, invalid corps, have in many instances been advantageously substituted for contract nurses, attendants, and cooks in the general hospitals. Appropriations are asked for the payment of washing in those hospitals and on transports, where a sufficient number of matrons cannot be employed; for the collection and preservation of pathological specimens in the army medical museum; and for the preparation and examination of drugs, in connection with the purveying depots. The health of the troops has been good, and the mortality less than the preceding year.

Syphilis conveyed by Vaccination.—Two instances of this have lately occurred in Paris. One of these was related to the Surgical Society of Paris by M. Chassaignac; and the other by M. Hirard to the Medical Society of Hospitals.

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BOOK NOTICES AND REVIEWS.

Outlines of the Chief Camp Diseases of the United States Armies as observed during the Present War—A Practical Contribution to Military Medicine. By JOSEPH JANVIER WOODWARD, M. D., Ass't. Surgeon U. S. A.; Member of the Academy of Nat. Sci., Phila.; of the Pathol. Soc., of Phila., etc., etc. Philadelphia: J. B. Lippincott & Co., 1863; pp. 364. $2.50.

The author of the present treatise is already known to the profession by his successful little work—the "Hospital Steward's Manual," and by his connection with the laborious duty of preparing for the Medical Department of the Army "The Medical History of the Rebellion." His official relations have necessarily involved earnest thought upon the subject of Camp Diseases, and with them he had previously acquired practical familiarity by actual service in the field. The book before us is essentially a practical one, and is worthy a place among the field books of the army surgeon, whilst in its pages the civil practitioner will find much valuable information for every day use.

Something of the kind had grown to be a necessity, for the formulæ of the text books on practice are confessedly wholly inadequate to the exigencies of the present time, either in camp or civil life. It is an *avant courier* which heralds the coming of the elaborated results of the grand experiences of the war.

In its general tenor, the book runs parallel with the ideas of Hygienic and Conservative Medicine now generally in vogue—ideas which are a healthy reaction from the formularized specifics, perturbations, and destructive methods of preceding practice. The consolidated facts, afforded by the war, have mercilessly overthrown a host of idolized old dogmas. After alluding to the fears generally entertained at the outset of the war, that our camps would be scourged by the same

pestilences which have, again and again, devastated European armies, and that in the change of climate and habits, incident to the progress of the Northern arms Southward, tropical diseases would produce greater havoc than the attacks of the enemy, he gives a brief account of the system of classification of diseases adopted by the Medical Department and some general statements as to the prevalency of each classified form as gathered from the official statistics.

The great conditions determining the character of Camp Diseases are threefold: Malarious, (Roino-Miasmata); Typhoid, (Idio-Miasmata); and Scorbutic. The productive agency of each of these and their blended agency are sketched perspicuously and forcibly. The blended product is known officially as Typho-Malarial Fever, and its history, including treatment, is given in concise and clear terms. Then follow sections upon Intermittent, Simple and Congestive; Chronic Malarial Poisoning; Jaundice; Camp Diarrhœa; Simple Diarrhœa; Acute Entiritis; Acute Dysentery; Chronic Diarrhœa; Camp Measles; Catarrh; Pneumonia; Pseudo-Rheumatic Affections, and, finally, an Appendix.

We strongly recommend the perusal of these chapters to the student of medicine, the army and civil practitioner, as containing a fund of fact, common sense and practical information nowhere else to be found in print. The general adoption of the hygienic and therapeutic methods recommended would go far to lessen both the sickness and mortality of the army, already inconsiderable when compared with any other of even approximate magnitude which has stood upon the face of the planet.

We are gratified to see that the author takes high and broad grounds against the absurd wholesale "Quinine prophylaxis" whilome, so strongly urged by sundry parties. He abjures it almost *totidem verbis* with this JOURNAL when the war began. A.

A Manual on Extracting Teeth—Founded on the Anatomy of the parts involved in the operation; the kinds and proper construction of the instruments to be used; the accidents liable to occur from the operation, and the proper remedies to retrieve such accidents. By Abraham Robertson, D.D.S., M. D., Author of Prize Essay on Extracting Teeth, &c. Philadelphia: Lindsay & Blakiston, 1863.

The title page of this little volume explains very fully its objects. From a rapid perusal we have no hesitation in saying the objects have been attained. The importance of the subject will be fully appreciated by every one who is compelled to submit to the unpleasant and painful operation for the removal of a tooth, and the importance also of its extraction with the least exertion, with the least amount of force by the operator, with the least possible injury to the surrounding parts, and consequently with the least amount of present pain and subsequent suffering to the patient.

After the introductory chapter—The Anatomy of the Jaws and Teeth. Pathology of Toothache. Instruments used for extracting teeth, and the proper method of using them. Of lancing the gums. Accidents attendant upon the extraction of teeth, and their remedies. And Anasthetics, each form the subject of a distinct chapter, which may be consulted with advantage by the physician as well as the dentist.

For sale by S. C. Griggs & Co. Price $1,00.

Transactions of the Eighteenth Annual Meeting of the Ohio State Medical Society—Held at Ohio White Sulphur Springs, June 16, 17, 18, 1863. From E. B. Stevens, M. D., Secretary.

The proceedings of the three day's session of this Society evince a commendable zeal in what its members conceive would advance the science of medicine and elevate the profession. A number of Reports and Essays, of real merit, were read, among which are the following:

The Valedictory Address of the President, J. W. Russell, M. D.

On the Employment of Electricity in Midwifery, by D. S. Gaus, M. D.

On New Remedies, by E. B. Stevens, M. D.

On Mollites Ossium, by N. Dalton, M. D.

On Adipose Tumors, by A. McBride, M. D.

Some of these productions deserve, and did our limits permit should receive a more extended notice—we may recur to them in a future number.

A list of the members is appended, making together a volume of which our neighbors of Ohio may well be proud.

Mental Hygiene. By J. Ray, M. D. Boston: Ticknor & Fields, 1863.

This work does not claim to be a systematic treatise on *Mental Hygiene*, but to expose the mischievous effects of many practices and customs prevalent in modern society; and to present practical suggestions relative to the attainment of mental soundness and vigor. It contains many facts, and enunciates important principles and suggestions, which will be red with interest and profit by the public and the legislator as well as the physician.

Price $1.00. For sale by S. C. Griggs & Co., 39 & 41 Lake street.

Journals and Pamphlets Received.—London Lancet, Cincinnati Lancet and Observer, Medical News, Journal of Ophthalmology, Pacific Medical and Surgical Journal, Canada Lancet, Druggists' Circular, Boston Medical and Surgical Journal, American Medical Times, Medical and Surgical Reporter, Buffalo Medical and Surgical Journal, Transactions of Ohio State Medical Society, Circular and Catalogue of the Long Island College Hospital, The Dental Register, Catalogue of the Berkshire Medical Institute for the year 1863.